

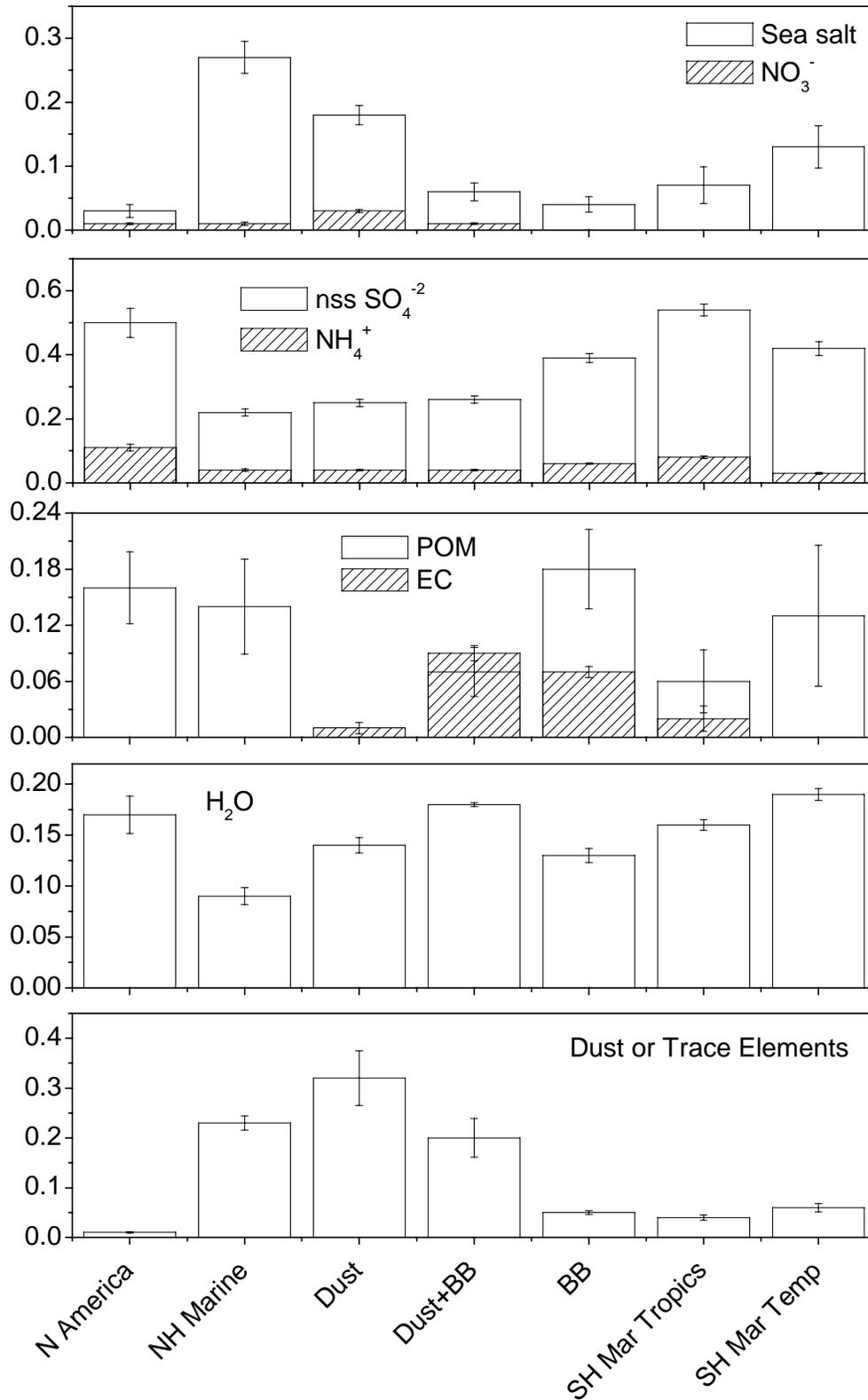
Table 1. Concentrations, Standard Deviations ($\pm 1\sigma$), and Absolute Uncertainties (95% confidence level) of the Mean of the Major Aerosol Submicron ($D_{\text{aero}} < 1 \mu\text{m}$ at 55% RH) Chemical Species for the Different Atlantic Ocean Air Mass Regimes.

Species $\mu\text{g m}^{-3}$	Air Mass Regime						
	North America	NH Marine	Dust	Dust & Biomass Burning	Biomass Burning	SH Marine Tropics	SH Marine Temperate
nssSO₄⁼	2.4 \pm 1.7 (0.08)	0.15 \pm 0.06 (0.004)	0.57 \pm 0.08 (0.01)	0.77 \pm 0.27 (0.02)	1.1 \pm 0.34 (0.02)	0.52 \pm 0.14 (0.008)	0.56 \pm 0.12 (0.01)
NH₄⁺	0.54 \pm 0.34 (0.02)	0.03 \pm 0.01 (0.002)	0.09 \pm 0.01 (0.004)	0.13 \pm 0.04 (0.004)	0.19 \pm 0.06 (0.004)	0.05 \pm 0.03 (0.002)	0.04 \pm 0.005 (0.003)
MSA	0.007 \pm 0.002 (0.0002)	0.004 \pm 0.003 (0.0001)	0.009 \pm 0.001 (0.0002)	0.009 \pm 0.004 (0.0002)	0.02 \pm 0.006 (0.0003)	0.02 \pm 0.009 (0.0003)	0.04 \pm 0.01 (0.0008)
Sea salt	0.12 \pm 0.09 (0.04)	0.22 \pm 0.16 (0.02)	0.43 \pm 0.14 (0.03)	0.22 \pm 0.11 (0.05)	0.11 \pm 0.07 (0.03)	0.08 \pm 0.05 (0.03)	0.14 \pm 0.06 (0.03)
NO₃⁻	0.04 \pm 0.03 (0.006)	0.005 \pm 0.009 (0.002)	0.06 \pm 0.03 (0.005)	0.03 \pm 0.02 (0.004)	0.02 \pm 0.02 (0.002)	< 0.001	< 0.001
nss sol K⁺	0.02 \pm 0.01 (0.002)	0.002 \pm 0.002 (0.0003)	0.02 \pm 0.01 (0.001)	0.16 \pm 0.09 (0.007)	0.25 \pm 0.09 (0.007)	0.004 \pm 0.001 (0.001)	0.004 \pm 0.002 (0.001)
OC	0.49 (0.07)	0.09 \pm 0.06 (0.03)	< 0.03	0.10 (0.03)	0.25 \pm 0.08 (0.06)	0.04 \pm 0.05 (0.02)	0.08 \pm 0.08 (0.05)
EC	< 0.01	< 0.01	0.02 (0.01)	0.30 (0.02)	0.35 \pm 0.21 (0.03)	0.01 \pm 0.03 (0.007)	< 0.01
Al	< 0.0002	0.01 \pm 0.02 (0.003)	0.06 (0.005)	0.05 (0.005)	0.01 (0.005)	0.005 \pm 0.008 (0.002)	0.007 \pm 0.01 (0.003)
Si	< 0.0005	0.04 \pm 0.07 (0.002)	0.18 (0.008)	0.14 (0.007)	0.01 (0.002)	0.009 \pm 0.01 (0.001)	0.006 \pm 0.01 (0.001)
Fe	0.008 (0.0005)	0.0002 \pm 0.0006 (0.0001)	0.04 (0.002)	0.03 (0.002)	0.005 (0.0003)	0.0005 \pm 0.001 (0.0001)	< 0.0003

Table 2. Concentrations, Standard Deviations ($\pm 1\sigma$), and Absolute Uncertainties (95% confidence level) of the Mean of the Major Aerosol Supermicron ($1 \mu\text{m} < D_{\text{aero}} < 10 \mu\text{m}$ at 55% RH) Chemical Species for the Different Atlantic Ocean Air Mass Regimes.

Species	Air Mass Regime						
	North America	NH Marine	Dust	Dust & Biomass Burning	Biomass Burning	SH Marine Tropics	SH Marine Temperate
$\mu\text{g m}^{-3}$							
nssSO_4^-	0.09 ± 0.13 (0.004)	< 0.001	0.05 ± 0.12 (0.003)	0.03 ± 0.08 (0.001)	0.02 ± 0.03 (0.001)	0.07 ± 0.09 (0.001)	0.03 ± 0.04 (0.001)
NH_4^+	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MSA	0.001 ± 0.003 (0.0001)	0.005 ± 0.004 (0.0001)	0.008 ± 0.004 (0.0002)	0.007 ± 0.008 (0.0002)	0.007 ± 0.006 (0.0001)	0.03 ± 0.018 (0.0005)	0.06 ± 0.02 (0.001)
Sea salt	9.2 ± 4.6 (0.3)	8.0 ± 2.8 (0.12)	20 ± 3.1 (0.46)	11 ± 5.7 (0.23)	4.6 ± 2.4 (0.09)	6.4 ± 3.2 (0.1)	9.5 ± 2.8 (0.18)
NO_3^-	2.30 ± 1.6 (0.08)	0.23 ± 0.23 (0.008)	0.76 ± 0.28 (0.02)	0.98 ± 0.53 (0.02)	1.1 ± 0.59 (0.02)	0.19 ± 0.11 (0.007)	0.14 ± 0.06 (0.01)
nss sol K^+	< 0.001	0.008 ± 0.03 (0.0004)	0.001 ± 0.001 (0.0001)	0.01 ± 0.01 (0.0003)	0.02 ± 0.01 (0.0003)	0.004 ± 0.003 (0.0001)	0.001 ± 0.001 (0.0001)
OC	0.42 (0.07)	0.20 ± 0.07 (0.03)	0.48 (0.05)	0.35 (0.05)	0.15 ± 0.13 (0.09)	0.13 ± 0.09 (0.03)	0.11 ± 0.05 (0.05)
EC	< 0.01	< 0.01	0.01 (0.01)	0.06 (0.02)	< 0.03	< 0.01	< 0.01
Al	0.009 (0.008)	0.02 ± 0.03 (0.002)	1.6 (0.07)	1.9 (0.08)	0.16 (0.009)	0.01 ± 0.02 (0.01)	0.01 ± 0.01 (0.001)
Si	< 0.005	0.05 ± 0.06 (0.002)	5.0 (0.21)	5.6 (0.17)	0.50 (0.02)	0.03 ± 0.05 (0.001)	< 0.003
Fe	0.02 (0.001)	0.01 ± 0.02 (0.001)	1.2 (0.05)	1.3 (0.06)	0.12 (0.008)	0.01 ± 0.02 (0.0005)	0.004 ± 0.004 (0.002)

Submicron Mass Fractions



Supermicron Mass Fractions

